

ABSTRACT OF THE DISCLOSURE

A method is provided for initiating and sustaining a combustive reaction in a solid fuel. The method includes generating at least one pulsed optical signal and directing the pulsed optical signal to a plurality of ignition points within at least one combustion chamber containing a solid fuel. The pulsed optical signal is generated by an optical source, e.g. a laser pump, and modulated using an intensity profiler. The intensity profiler modulates the pulsed optical signal to initially have a first peak power sufficient to initiate a combustive reaction in a solid fuel. The intensity profiler further modulates the pulsed optical signal to subsequently have a second peak power sufficient to sustain the combustive reaction until sufficient exothermic energy is released by the combustive reaction to make the reaction self-sustaining.